FORM PTO-1449 U.S. Department of Commerce Attorney Docket Number Serial No. Patent and Trademark Office 5308-278 To be assigned LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary) Applicants: Ryu et al. Filing Date: Concurrently herewith Group: Unknown **U. S. PATENT DOCUMENTS** Examiner Document Filing Date Initial Number Date Name Class Subclass Appropriate 3,047,439 07/31/62 H.J. Van Daal et al. 2 3,121,829 02/18/64 A. Huizing et al. 3 3,628,187 12/04/71 107 DeLoach, Jr. et al. 331 06/27/78 4,096,622 MacIver 29 578 4,329,699 05/11/82 5 Ishihara et al. 357 2 4,607,270 08/19/86 6 lesaka 357 15 4,638,551 01/27/87 Einthoven 29 571 4,720,734 8 01/19/88 Amemiya et al. 357 15 4,738,937 04/19/88 **Parsons** 437 180 10 4,742,377 05/03/88 Einthoven 15 357 11 4,762,806 08/09/88 Suzuki et al. 437 100 12 4,765,845 08/23/88 Takada et al. 136 258 13 4,816,879 03/28/89 Ellwanger 357 15 14 4,866,005 09/12/89 Davis et al. 437 100 15 4,875,083 10/17/89 Palmour 357 23.6 16 4,901,120 2/13/90 Weaver et al. 357 15 17 4,907,040 03/06/90 Kobayashi et al. 357 4 04/17/90 18 4,918,497 17 Edmond 357 11/28/95 19 5,471,072 Papanicolaou 257 77 20 5,712,502 1/27/98 Mitlehner 257 341 21 5,789,311 8/4/98 Ueno et al. 438 573 22 5,801,836 08/01/98 Bakowski et al. 257 487 23 5,907,179 05/25/99 257 475 Losehand et al. 24 5,914,500 06/22/99 Bakowski et al. 257 77 25 5,932,894 08/03/99 Bakowski et al. 257 76

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^{*}EXAMINER - Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office					nerce	Attorney Docket Number 5308-278			Serial No. To be assigned
LIST OF DOCUMENTS CITED BY APPLICANT									
(Use several sheets if necessary)									
						Applicants: Ryu et al.			
						Filing Date: Concurrently herewith			Group: Unknown
TN 26 5,977,605 11			5,977,605	11/02/99	Bakowsky et al.		257	496	
	- 	27	6,002,159	12/14/99	Bakowski et al.		257	493	
		28	6,005,261	12/21/99	Konstantinov		257	77	
		29	6,040,237	03/21/00	Bakowski et al.		438	521	
	ļ	30	6,083,814	07/4/00	Nilsson et al.		438	519	
		31	6,110,813	08/29/00	Ota et al.		438	597	
		32	6,191,015 B1	02/20/01	Losehand et al.		438	570	
		33	6,313,482 B1	11/6/01	Baliga		257	77	
	1	34	6,320,205 B1	11/20/01	Pfirsch et al.		257	77	
7	M	35	6,573,128 B1	06/03/03	Singh		438	167	
	FOREIGN PATENT DOCUMENTS								
			Document						Translation
<u> </u>	-/	-	Number	Date	Country		Class	Subclass	Yes No
	M	36	WO97/087 54	03/06/97	PCT				
ļ	1	37	63-133569	06/06/88	Japan				
	\perp	38	62-279672	06/06/88	Japan				
	4_	39	58-148469	03/09/83	Japan				
		40	EP111168 8A1	06/27/01	EPO				
7	Jal	41	WO 96/03774	02/08/96	PCT				
77	71	1 42 Katsunori Ueno, Tatsue Urushidani, Kouichi Hahimoto, and Yasukazu Seki. "The Guard -Ring Termination						ing Termination	
' '	1		for the High-Voltage SiC Schottky Barrier Diodes." IEEE Electron Device Letters. Vol. 16. No. 7, July 1995.						
17	M	43	43 Singh, R. and J.W. Palmour, "Planar Terminations in 4H-SiC Schottky Diodes with Low Leakage				akage		
<u> </u>	and High Yields," IEEE International Symposium on Power Semiconductor Devices and ICs, 1997.						S, 1997.		

EXAMINER *EXAMINER

Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PT		19 U.S. Department of Commerce Patent and Trademark Office	Attorney Docket Number 5308-278	Serial No. To be assigned				
LIS	T OF	DOCUMENTS CITED BY APPLICANT						
		(Use several sheets if necessary)	Applicants: Ryu et al.					
			Applicants: Kyu et al.					
			Filing Date: Concurrently herewith	Group: Unknown				
/	44	Kosiachenko, L.A. and E.F. Kukhta, V.M. Skilian	rchuk, "Light Emission from Metal at Forward Bias					
7 100		of a Shottky Diode," Zhurnal tekhnicheskoi fiziki	[Journal of Technical Physics], Vol. 54, 1	nal of Technical Physics], Vol. 54, No. 6, 1984.				
)	45	Kyoritsu Shuppan Kabushiki Kaisha, Crystallogr	aphy Handbook					
	46	The Electrical Engineering Handbook, Richard C	C. Dorf, editor, Second Edition, CRC/IEEE	Press.				
	47	Sze, S.M. Physics of Semiconductor Devices, Jol	hn Wiley & Sons, p. 250-254.					
	48	Streetman, B.G. Solid State Electronic Devices.	Second Edition, Prentice-Hall, 1980, pp. 19	92-3, 201, 443				
	49	Saidov, M.S., Kh. A. Shamuratov, and A. Umurz						
	heterojunctions." Soviet Physics of Semiconductors. Vol. 13, No. 9, September, 1979, pp. 1054-105							
	Work Functions of AIN and SiC Crystals." Journal of Applied Physics. Vol. 55, No. 4. February 15, 1984 pp. 994-1002.							
	Edmond, J.A., J. Ryu, J.T. Glass, and R.F. Davis. "Electrical Contacts to Beta Silicon Carbide Thin Films							
	Journal of the Electromechanical Society. Vol. 135, No. 2, February 1988, pp. 359-362. Valdrop, J.R. and R.W. Grant. "Formation and Schottky barrier height of metal contacts to β-SiC."							
	Applied Physics Letters. Vol. 56, No. 6, February 5, 1990, pp. 557-559.							
	53	Ioannou, D.E. and N.A. Papanicolaou. "Deep Lev		iC and				
	Layers." Abstracts. Fourth National Review Meeting On Growth and Characterization of SiC and Its Employment in Semiconductor Applications.							
	Anikin, M.M. et al. "Electrostatic properties of SiC-6H structures with an abrupt pin junction," Soviet Physics Semiconductors. Jan. 1988, Vol. 22(1): pp. 80-83.							
	Glover, G.H. "Charge Multiplication in Au-SiC (6H) Schottky Junctions." Journal of							
	56	Applied Physics. November, 1975, Vol. 46, No. Ioannou et al. "The Effect of Heat Treatment on A						
	Transactions on Electron Devices. August, 1979, Vol. Ed-34, No. 8: pp. 1694-1699.							
	57	Violin, E.E., et al. "Light Emitting Devices Based 1973, p. 565. (edited by Marshall, Faust, Ryan).	d on Silicon Carbide." Silicon Carbide.					
	Powell, J.A. "Silicon Carbide: Progress in Crystal Growth." Material Research Society Symposium Proceedings. 1987, Vol. 97: pp.159-168.							
	59	·						
	60 Appels et al. "High-voltage thin layer devices (RESURF devices)," IEDM Tech. Dig., 1979, pp. 238-41.							
	61 Li et al. "Theoretical and Experimental Study of 4H-SiC Junction Edge Termination," Materials Science Forum, Vols. 338-342 (2000), pp. 1375-8.							
	Merchant et al. "Realization of High Breakdown Voltage (>700V) in Thin SOI Devices," Tech. Digest of ISPSD '91, pp. 31-4.							
DW	63		rge Sensitivity of High Voltage Blocking Structures with ron Devices, Vol. 38, No. 3, July 1991, pp. 1666-75.					

DATE CONSIDERED 04/13 / CONSIDERED Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. EXAMINER *EXAMINER

	O-1449 U.S. Depa Patent and Trad	lemark Office		Attorney Docket Number 5308-278			Serial No. 10/731,860	
O 1 P 2	ox is	heets if necessary)	Applicants: Ryu et al.				
STRADE	INPRESE!			Filing Date: December 9, 2003			Group: 2811	
	-		U. S. PATENT DO	CUMENTS				
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	:	· ·						
		F-	OREIGN PATENT	DOCUMENTS	***************************************			
	Document Number	Date	Country		Class	Subclass	Translation Yes No	
			21111					
			OTHER DOC	IMENTO	-			
TN	OTHER DOCUMENTS 1 Kinoshita et al. "Guard Ring Assisted RESURF: A New Termination Structure Providing Stable and High Breakdown Voltage for SiC Power Devices," Tech. Digest of ISPSD '02, pp. 253-6.							
						· · · · · · · · · · · · · · · · · · ·		

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DATE CONSIDERED 4/13/WYT
Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PT	O-14	49 U.S. Departm Patent and Tradem	ent of Comn ark Office	nerce	· Attorney Docket Number 5308-278			Serial No. 10/731,860
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0.1 P	E	(Use several shee	ts if necessar	y)	Applicants: Ryu et al.			
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PATRADE TRADE	MARY	·			Filing Date: December 9, 2003			Group: 2811
			·	U.S. PATENT DO	CUMENTS			
Examiner Initial		Document Number	Date	Name		Class	Subclass	Filing Date if Appropriate
TIN	1.	5,994,189	11/30/99	Akiyama		438	268	
					<u> </u>			
	ļ.							
							-	
	<u> </u>	1	Ī	FOREIGN PATENT	DOCUMENTS			
		Document Number	Date	Country		Class	Subclass	Translation Yes No
TOW	2.	EP1076363A2	2/14/01	EPO				
771	3.	JP3147331	6/24/91	JP				Abstract
				<u> </u>				
	<u> </u>			OTHER DOCL	JMENTS	·		
TIV	4.	International Search Report and Written Opinion of the International Searching Authority for corresponding PCT application no. PCT/US2004/001183, mailed July 7, 2004.						
TTN	5.	Onose et al. Over 2000 V FLR Termination Technologies for SiC High Voltage Devices, 12th International Symposium on Power Semiconductor Devices and IC's. Toulousse, France, May 22-25, 2000.						

EXAMINER

DATE CONSIDERED 4/13/ 2005
Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. *EXAMINER